

H. w.—The heavy third band of *f. w.* is equally heavy on *h. w.*, and is bisected at a right angle by a heavy brown line, forming a T mark. The slight fourth band commences on this wing at about the same distance from the third as it does on *f. w.*, and runs a zigzag course to inner margin. The fifth band is broken, as described on *f. w.* The outer margin of this wing is more deeply notched than the outer margin of *f. w.*, and the lunar marks are more distinct, and are larger. All the markings are of the same dark brown color.

In general appearance this species differs greatly from *hortaria*, the dark scales being much less diffused.

The under side of both wings is concolorous, or nearly so, with their upper side, with very few scattered brown scales. Of the *f. w.* under side all the bands of the upper side are distinct and clear except the first. Of the *h. w.*, the bands are much fainter, the third and fifth being the heavier, while the fourth is scarcely perceptible.

A single ♂ specimen from Indiana. Coll. W. V. A.

I hesitated for some time before venturing to describe this species, thinking it possible that it may be Gueneé's *B. dendraria*, but Packard's statement that the third and fourth lines of *dendraria* were broad, confused and blended, does not apply to the example before me.

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## MICRO-LEPIDOPTERA.

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### CORISCUM.

#### *C. 5-strigella* Cham.

By a slip of the pen the description of this species contains the following sentence: "Annulus about its middle at the tip." It should read: "Middle and another at its tip." There are several indistinct costal streaks besides the five larger ones from which it takes its name, and there are four brown spots or longitudinal dashes along the line where the general brownish-gray color of the wing meets the white dorsal part.

## COLEOPHORA.

*C. gigantella* Cham.

A typographical error in the original description makes it read "*these* are in the apical part of the wing" for "*three* are in," etc. The species was described from a single specimen from Canada, and was placed in the section "having the palpi simple." Since then I have bred it from cases found in May attached to Maple trees (*Acer saccharinum*), in Kentucky. The specimen in Mr. Saunders' collection had probably been a little injured in setting, as in the bred specimens I find there is a minute tuft at the apex of the second joint of the palpi, and there is also an ochreous streak from the base along the dorsal margin of the fore wings.

Among the European species figured in the *Nat. Hist. Tin.*, *C. virgaureæ* most nearly resembles this species, which, however, is larger than *virgaureæ* and has no brown dusting on the wings. *Virgaureæ*, likewise, has the costa narrowly white to the middle, whilst in *gigantella* the extreme costa is of the same pale brownish ochreous with the streaks on the wing. The streaks on the fore wings are in other respects alike in the two species. The hind wings, abdomen and anal tuft are gray (in *virgaureæ* the tuft is yellowish ochreous). The ciliæ of the fore wings are a little paler and more grayish than the streaks on the wings, and the outer surface of the palpi is brownish ochreous. The larval case is of the same form in this species as in *virgaureæ*, except that it is a little more slender, and it is of a sordid brownish-yellow color. The imago comes out in the latter half of June.

*C. shaleriella* Cham. resembles *gigantella* closely, but is a little larger, having an *al. ex.* of  $\frac{7}{16}$  inch, while that of *gigantella* is five lines; and in *shaleriella* the antennæ are not annulate with brown.

Both of these species approach *C. cratipennella* Clem. Dr. Clemens gives no measurements, and I have not seen his species; but from his account of it, it would seem to differ from *gigantella* and *shaleriella* by the unusual width of the streak which extends along the wing between the costal and subcostal veins, and by "the stripe along the subcostal vein which sub-divides into two branches terminating on the costa," and in the number and course of the streaks in the apical part of the wing; the color of the basal portion of the costa is not stated by Dr. Clemens.

I have no specimen of *shaleriella* for comparison now, and it may prove to be identical with *gigantella*.

*C. fagicorticella* Cham.

This species does not closely resemble any of those figured in *Nat. Hist. Tin.*; the larval case, however, resembles that of *C. murinipennella* in form. The imago is perhaps more like *C. Gnaphalii* than any other there figured. The palpal tuft is very small and the *al. ex.* varies from something over  $\frac{1}{2}$  to about  $\frac{1}{4}$  inch. The wings are very indistinctly marked, and the yellowish tinge of the apical portion of the primaries is faint. There is a wide, pale yellowish-ochreous streak along the dorsal margin; indeed sometimes the entire dorsal part of the wing beneath the fold is of that color, and the furcate yellowish streak above the fold is so close to it that one sometimes may fail to observe that the fold itself is whitish. Very faint lines may also be observed along the course of the veins in the apical part of the wing, and their course in perfectly fresh specimens is made more distinct by lines of sparsely dusted brown scales which margin them; the streak along the costa is also very indistinct. Ciliæ of fore wings pale yellowish; hind wings and their ciliæ, and abdomen, gray; anal tuft white. Length of larval case  $2\frac{1}{2}$  lines.

*C. unicolorella* Cham.

This species was described from captured specimens, and I have since bred it. The larval case does not closely resemble any of those figured in *Nat. Hist. Tin.* It is most like that of *virgaureæ*, but is much shorter in proportion and smaller every way, with the anterior end curved downwards. It is grayish or ochreous, with little blackish specks adhering to it. Length  $2\frac{1}{4}$  lines.

The imago is sometimes a little larger than the dimensions given ( $\frac{5}{16}$  inch), reaching  $\frac{3}{8}$  inch *al. ex.* It is proper to add that the hind wings and upper surface of the abdomen are slate color, the under surface of the abdomen yellowish, and the antennæ very faintly annulate with yellowish. Otherwise the entire insect is as I have described it, of a grayish drab color. Of the species figured in *Nat. Hist. Tin.*, it seems to come nearest *siccifolia*, having the hind wings wider than in the other unicolorous species there figured; but the fore wings are rather darker than in that species. The case is very common in May, adhering to the bark of forest trees, but the food plant is unknown.

*C. linea-pulvella* Cham.

Palpi tufted; antennæ with the basal and a few following joints a little enlarged. Head and appendages pale ochreous, the outer surface of the

palpi brownish, and the antennæ with alternate annulations of dark ochreous and white. Fore wings ochreous, with *white lines so densely dusted with dark brown or blackish scales as almost to conceal the white*; one of these extends along the costal margin; another from the base to the apex, giving off three branches to the costal margin, the first being emitted just before the middle; another extends along the fold, and there is a more indistinct one along the dorsal margin. Hind wings fuscous; abdomen dark lead color above, paler and more ochreous below. *Al. ex.* 5 lines. Ky., June 21st (some specimens in Cambridge Museum are labeled by mistake *nigripulvella*). The basal joint of the antennæ is but little larger than those immediately following, but these are themselves a little enlarged.

*C. argentella*.

This is *C. argentialbella* Cham., CAN. ENT., v. 7, p. 75, and *Bul. Geo. Survey* (Hayden), v. 3, pt. 1, pp. 133 and 141—not *C. argentialbella* Cham., CAN. ENT., v. 6, p. 128. *Argentella* is heretofore known only from Texas and Colorado, but I have also since taken a single specimen in Kentucky. When it was first described I had no means of reference to my collection of Kentucky species, nor to my notes or published descriptions, and the previous use of the name *argentialbella* for the smaller Kentucky species escaped my recollection. *Argentialbella* is retained for the smaller, and first described species, known as yet only from Kentucky; *argentella* for the larger species.

*C. bistrigella* Cham.

There seems to be much difference in the intensity of the yellow streaks on the fore wings and the amount of brown dusting along the margins of the streaks. The single specimen taken in Colorado was somewhat worn, and all my specimens from Texas had been captured for a good while, and the colors may have faded somewhat. It may turn out, on the examination of fresh specimens, that it is identical with *C. basistrigella* Cham. from Colorado, which is only known by a single specimen, which, however, is in perfect condition. Neither has been found except in Texas and Colorado as yet.

*C. caryaefoliella*.

*C. cretaticostella*? Clem.

*C. rufoluteella* Cham.

Dr. Clemens gave names to several species which were known to him only by the food plant, larval case or larva. Among these he mentions a species feeding on Hickory leaves under the name of *caryaefoliella*. He also describes a captured imago under the name of *cretaticostella*, but the description is so very brief and insufficient that without seeing his specimen I cannot be altogether certain that it is identical with that bred by me from larvæ feeding on Hickory leaves. His description, however, of *cretaticostella*, such as it is, is applicable to the Hickory-feeding species bred by me. I know three species feeding on Hickory leaves, but have only succeeded in rearing the imago from one, and as that one agrees in the characters of the case and larva with the case and larva mentioned by Clemens, I adopt the name suggested by him. His species *cretaticostella* was described in January, 1860, and his mention of the larva and case of *caryaefoliella* under that name was in 1861, so that the former name would be entitled to priority; but as there may be doubt whether the species are the same, and as the description of *cretaticostella* is so imperfect, and as, on account of the ease with which bred species may be identified, it is always desirable that the specific name should be derived from the food plant, I adopt *caryaefoliella* for this species.

*C. rufoluteella* Cham. is known only from captured specimens. I have always found it in abundance about the middle of July, resting upon palings in Linden Grove Cemetery, in Covington, Ky., a mile away from any Hickory trees. There it always makes its appearance suddenly and in considerable numbers, so that I have always supposed it to be a feeder on some species of plant found in the cemetery enclosure. I am, however, utterly unable to distinguish it from specimens bred by me in the latter part of June from larval cases found feeding on Hickory leaves in the manner described by Dr. Clemens for *caryaefoliella*, and I believe it to be the same species.

The species of this genus pass by such gentle gradations from those having the antennae densely clothed with scales, or the basal joint of it tufted or greatly enlarged, and with the second joint of the palpi distinctly tufted, to those in which both antennae and palpi are simple, that these characters afford little assistance in subdividing the genus. It is sometimes difficult to determine whether we should say "the basal joint of the antennae tufted," or only "enlarged," and so as to the palpi. Thus formerly (CAN. ENT., v. 6) I placed *rufoluteella* in the section "basal joint of antennae with a small tuft, palpi simple." But it now seems to me that

it would be more correct to say "basal joint of antennae somewhat enlarged ; second joint of palpi with a very minute tuft."

The species is ochreous ; the head and palpi pale or yellowish ochreous ; the antennae white, annulate with brown ; fore wings reddish ochreous, darker towards the apex, with the costal margin from base to ciliæ white.

The larval case is ochreous red, cylindrical, laterally compressed at the hinder end, and over three lines long. It is attached to the under side of the leaves of *Carya alba*, and the larva eats out the parenchyma in little patches approaching a square form.

The ornamentation of the imago is nearer that of *C. limosipennella* than to any of the other species figured in *Nat. Hist. Tin.* *Al. ex.*  $4\frac{1}{2}$  lines.

*C. Vernoniæella*, n. sp.

This species, like many others which I do not specially name, is known only by its larval case, and I refer to it simply on account of its great size. It is about an inch long and slender, reminding one somewhat of the basal half of a "darning needle." The larva feeds on leaves of the Iron-weed (*Vernonia*). Miss Murtfeldt informs me that she has found it in Missouri, and I have found it in Kentucky.

There are two species besides *caryaefoliella* feeding on Hickory leaves. One of these makes a very small case, laterally compressed and but little more than a line long. Another makes a case about the size of that of *caryaefoliella*, but it is also somewhat laterally compressed, and the case having been cut out of the edge of the leaf, the upper edge of it shows the serrations of the leaf.

There is also a species making a pistol-formed case that feeds on Chestnut leaves. And the large blackish pistol-formed case of *C. tilliaella* Clem., the larva and case only of which are known, is also found here occasionally. I have also met with a small pearly-white case less than two lines long, and a white fusiform case one-half an inch long, besides many others found in this locality. A species which feeds on Blackberry leaves (*Rubus villosus*) makes a case out of the edge of the leaf, showing the serrations on the dorsal edge.